s18QUIZ: EXP LOG (QUIZ v233)
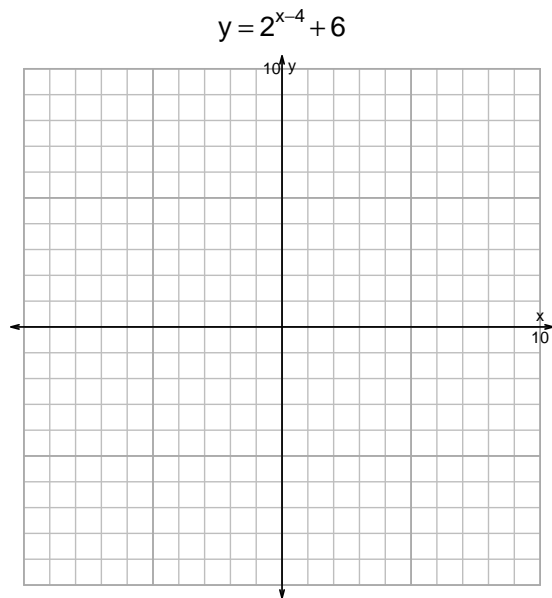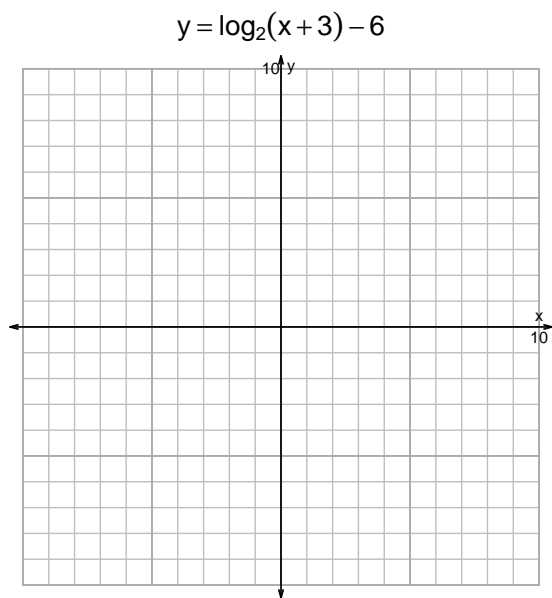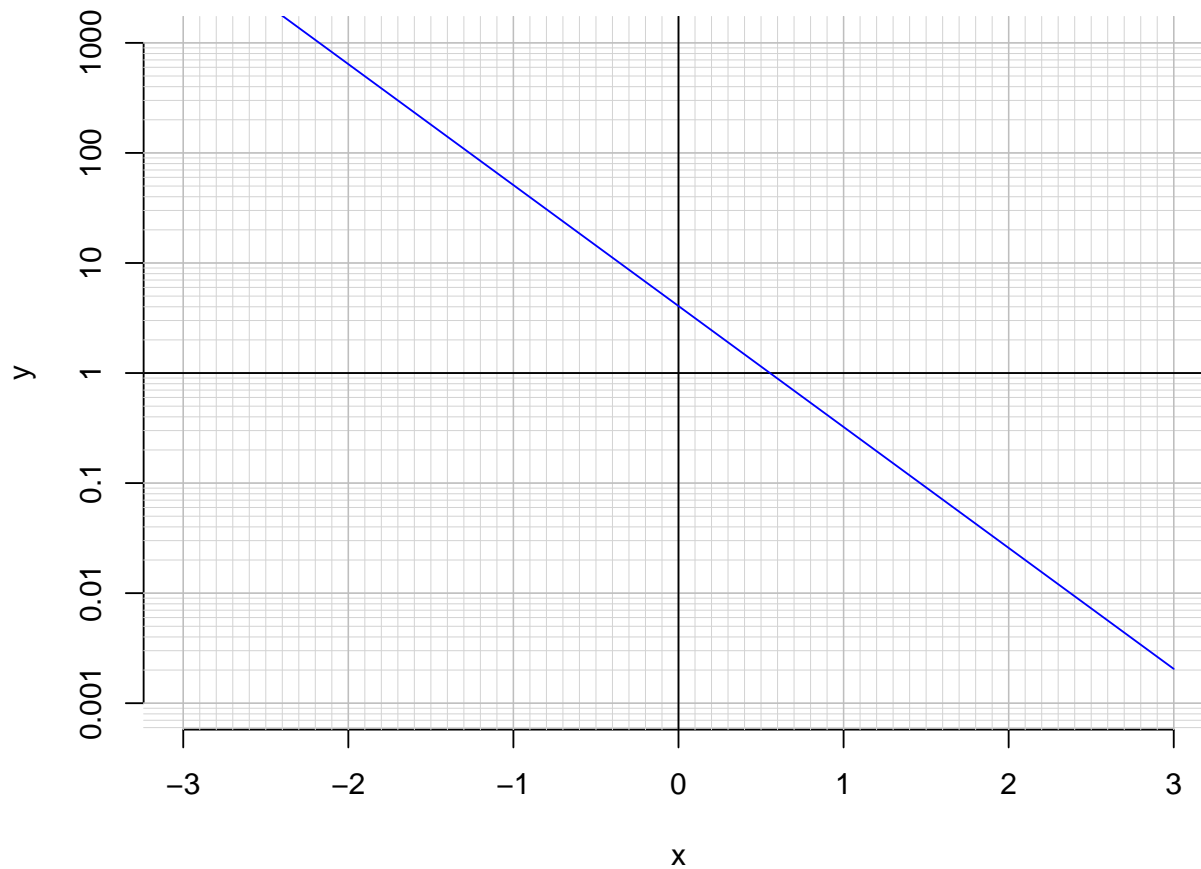
1. Graph $y = \log_2(x + 3) - 6$ and $y = 2^{x-4} + 6$ on the grids below. Also, draw any asymptotes with dotted lines.

$$y = \log_2(x + 3) - 6$$

$$y = 2^{x-4} + 6$$

2. Write (but do not evaluate) the solution to the equation below by writing a logarithmic expression.

$$-17 = \left(\frac{-3}{5}\right) \cdot 10^{7t/4}$$

3. An exponential function $f(x) = 4.06 \cdot e^{-2.53x}$ is graphed below on a semi-log plot.

a. Using the plot above, evaluate $f(-1.7)$.

b. Express $f^{-1}(x)$, the inverse of f.

c. Using the plot above, evaluate $f^{-1}(0.02)$.